

auxiliary amplifying circuit with a high signal to noise ratio is a minimum that is greater than about 20 dB.

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26. (New) The signal amplifying circuit system according to Claim 24 in which the signal to noise ratio of said auxiliary amplifier having a high signal to noise ratio is kept at greater than about 40 dB.

27. (New) The signal amplifying circuit system according to Claim 25 in which said detector activates said switch at light levels below about 0.02 lux. --

#### REMARKS

The Patent Office Examiner's rejection of Claims under 35 USC §103(a) over Iketani '136 in view of Thommen '181 is respectfully traversed. These references generally teach subject matter discussed by applicant in the background information. That is, devices that detect illumination and adjust the iris and/or control the amplification of a single amplifier.

Iketani for example discloses and teaches compensation for a variation in illumination of an object due to distance between the video camera and object being photographed. Specifically, light information 22 from an object through iris 12 of lens 14 is divided by half mirror 10 and distance is accounted for by AF sensor 20. From the distance information, control circuit 30 controls iris 22 and auto focussing mechanism FEC 38.

Otherwise, AGC amplifier 24 is set in EF position, and controls switch 32 from output information of control circuit 30, and varies the gain of AGC amplifier 24 to reserve a suitable exposure. This reference has little or no relation to applicant's invention.

The reference of Thommen discloses and teaches an invention to balance a variable gain amplifier with an iris drive to reserve the best S/N ratio, in which amplifier gain and lens opening are controlled by a control network. This reference has little or no relation to applicant's invention as now claimed.

Also it appears that Thommen simply teaches employing a high gain when the signal to noise ratio is low, which is obviously required, or low gain when signal to ratio is high and a lot of gain is not necessary. This is very different from expressly changing the gain by switching to a separate auxiliary amplifier having a low signal to noise ratio when the light conditions are extremely low. It is interesting to note that Thommen describes in column 4, lines 57 through 62 that the amplifier has a relatively high gain and "creates a low S/N ratio". The distinction here is that Thommen describes creating a S/N ratio rather than a system itself that adjust to an amplifier with a particular low S/N ratio for extremely low light conditions.

Applicants respectfully submit that the Thommen patent is more or less standard for increasing the sensitivity of video

device to low light levels. However, the device of Thommen would not extend the range of sensitivity to the low light levels disclosed and described in the application.

Accordingly, there is nothing in Thommen that could be combined with Iketani which would produce applicant's invention as now claimed. Iketani shows low and high gain amplification which it is presumed would be for high and low gain signal to noise ratios. This is different from what the applicant teaches. There is nothing in Iketani or Thommen that teaches detecting the illumination of an object and then switching between completely separate amplifiers for switching from low gain high S/N to high gain low S/N or visa versa. Iketani only shows a switch to select high or low gain and does not show separate gain control amplifiers. High and low amplification is selected by the position of switch 32 (Fig. 2). It is respectfully submitted that no reasonable combination of Iketani with Thommen would produce anything much less applicant's invention as now claimed.

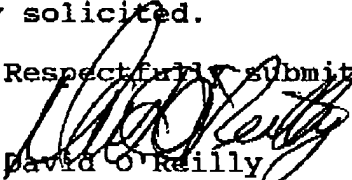
The references of Nutting '766 has been carefully reviewed and is no more applicable than the references of Iketani and Thommen. Nutting teaches controlling the iris of a lens, a sampling and hold (S/H) circuit and a video driver picking up part of the light input of a half mirror. The light signal is transformed to an electrical signal and then processed by a computer. This reference has no relation to applicant's claimed

invention.

It is respectfully requested that this response be considered as including a conditional petition for an extension of time sufficient to make this response timely if a Petition for an Extension of Time is inadequate or is omitted. Please charge the costs of any extension or additional extension of time, if needed, to Deposit Account 15-0640.

Reconsideration of this application and allowance of the claims as now submitted are earnestly solicited.

Respectfully submitted,

  
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